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# Acute Coronary Syndromes

## TICAGRELOR VERSUS CLOPIDOGREL IN WOMEN WITH ACUTE CORONARY SYNDROMES - A SUBSTUDY FROM THE PROSPECTIVE RANDOMIZED PLATELET INHIBITION AND PATIENT OUTCOMES (PLATO) TRIAL

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**Background:** In acute coronary syndrome (ACS) women have higher morbidity, mortality and risk of bleeding than men, which may be partially explained by differences in baseline characteristics, but also by differences in response to antithrombotic therapy.

**Methods:** We performed a subset analysis of PLATO data to assess the effect of gender on efficacy and treatment-related complications of ticagrelor (T) vs. clopidogrel (C) in patients with ST-elevation or non-ST-elevation ACS. Hazard ratios and 95% confidence intervals (CI) were adjusted for baseline covariates, including age. Nominal significance levels were not corrected for multiplicity.

**Results:** Women and men had similar rates of cardiovascular death, myocardial infarction and stroke (1.00; 0.89-1.12) and total mortality (0.92; 0.78-1.08), but women had less overall major bleeding (0.80; 0.71-0.90) because of lower use of coronary artery bypass graft (CABG) surgery. T consistently reduced ischemic endpoints and mortality, regardless of gender (table). There was no significant increase in overall major bleeding, and the increase in non-CABG related major bleeding tended to be less in women than men. Dyspnea and ventricular pauses were more frequent with T, and did not differ by sex.

| | N | T | C | Adjusted Hazard Ratio (95% CI) | Interaction p-value |
|---|---|---|---|---|---|
| CV death, MI, or stroke | | | | | |
| Women | 5288 | 11.2 (276) | 13.2 (327) | 0.88 (0.74-1.06) | 0.88 |
| Men | 13336 | 9.4 (583) | 11.1 (685) | 0.87 (0.77-0.98) | |
| Total death | | | | | |
| Women | 5288 | 5.8 (143) | 6.8 (167) | 0.92 (0.71-1.19) | 0.50 |
| Men | 13336 | 4.0 (254) | 5.7 (338) | 0.82 (0.68-0.99) | |
| Definite stent thrombosis | | | | | |
| Women | 2689 | 1.2 (15) | 1.4 (19) | 0.74 (0.38-1.44) | 0.69 |
| Men | 8600 | 1.4 (56) | 2.1 (86) | 0.63 (0.45-0.88) | |
| Major bleeding | | | | | |
| Women | 5237 | 10.7 (252) | 10.6 (247) | 1.00 (0.82-1.22) | 0.43 |
| Men | 13184 | 12.0 (707) | 11.5 (680) | 1.10 (0.98-1.24) | |
| Non-CABG major bleed | | | | | |
| Women | 5327 | 6.1 (142) | 5.2 (124) | 1.19 (0.90-1.56) | 0.42 |
| Men | 13184 | 3.8 (219) | 3.3 (180) | 1.37 (1.10-1.72) | |
| | | | | | |

**Conclusion:** In women with ACS, T reduced ischemic events and mortality compared with C without an increase in major bleeding; there were no significant differences in extent between men and women with ACS. T may therefore be a useful ACS treatment in women as well as in men.